DOCUMENT RESUME

ED 187 270 HE 012 745

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TITLE	Predictability of First-Year University of Washington Performance for Foreign Undergraduates Entering Autumn 1978.
INSTITUTION	Washington Univ., Seattle. Educational Assessment Center.
REPORT NO	EAC-80-16
PUB DATE	Mar 80
NOTE	40p.
AVAILABLE FROM	Educational Assessment Center, University of Washington, 1400 Campus Parkway, PB-30, Seattle, WA 98195
EDRS PRICE	MF01/PC02 Plus Postage.
DESCRIPTORS	*Academic Achievement; *College Students; Comparative Analysis; Educational Background; *English (Second Language); *Foreign Students; Grade Point Average; *Grade Prediction; Higher Education; Immigrants; *Language Fluency; Place of Residence; Predictor Variables; State Universities; Transfer Students
IDENTIFIERS	*University of Washington

ABSTRACT

Presented are background and academic performance data for one cohort of foreign undergraduates who entered the University of Washington (UW) as new students, those 336 entrants in fall 1978. Initially, the total group was subdivided on the basis of whether English was the "mother tongue" of the student's home country (26 percent came from English-speaking countries). The English- and non-English-speaking language groups were then compared and contrasted on selected pre-entry variables (such as, proportions from high school, two-year colleges, and four-year colleges). Next, employing five of these background variables as the breakout variable, first-year UW performance was profiled by comparing actual and predicted mean GPAs for levels within each breakout. Three highlights emerged. First, as would be expected, pre-college verbal performance was associated with first-year UW GPA for both language groups. In addition, for most comparisons the English-speaking group generally achieved higher mean GPAs than the corresponding non-English-speaking group. Second, regardless of language group, students who entered the University directly from a school outside the United States achieved mean first-year GPAs which were substantially higher than predicted. Lastly, when residence category was considered as the breakout, one "superior" group (F-1 visa students from English-speaking countries) and one "low" performing group appeared (nonimmigrants with other than an F-1 visa, all of whom were in the non-English-speaking language group). (Author)

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Educational Assessment Center

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March 1980

80-16

Predictability of First-Year University of Washington Performance for Foreign Undergraduates Entering Autumn 1978

Virginia A. de Wolf

Abstract

This current report presents background and academic performance data for one cohort of foreign undergraduates who entered the University of Washington (UW) as new students, those 336 entrants in Autumn Quarter 1978. Initially, the total group was subdivided on the basis of whether or not English was the "mother tongue" of the student's home country (26% came from English-speaking countries). The English- and non-English-speaking language groups were then compared and contrasted on selected pre-entry variables (such as, proportions from high school, 2-year colleges, and 4-year colleges). Next, employing 5 of these background variables as the breakout variable, first-year UW performance was profiled by comparing actual and predicted mean GPAs for levels within each breakout. Three highlights emerged. First, as would be expected, pre-college verbal performance was associated with first-year UW GPA for both language groups. In addition, for most comparisons the English-speaking group generally achieved higher mean GPAs than the corresponding non-English-speaking group. Second, regardless of language group, students who entered the University directly from a school outside the United States achieved mean first-year GPAs which were substantially higher than predicted. Lastly, when residence category was considered as the breakout one "superior" group (F-1 visa students from English-speaking countries) and one "low" performing group appeared (nonimmigrants with other than a F-1 visa, all of whom were in the non-English-speaking language group).

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JUN 2 1980

Predictability of First-Year University of Washington Performance for Foreign Undergraduates Entering Autumn 1978

The current study was undertaken at the request of the University of Washington's (UW) Office of Undergraduate Admissions in order to learn more about two special subgroups of UW undergraduates who were not United States (US) citizens, namely those students classified as having either an immigrant foreign visa or a nonimmigrant (ex., F-1 student) foreign visa. Information on this group of undergraduates has not been systematically collected, despite the fact that the UW has enrolled a substantial number of foreign students over the years. In fact, nearly all research on our UW undergraduates is based on those entering from Washington State schools. And, in addition, while several service-oriented units exist on campus to serve our community of international students (for ex., Foundation for International Understanding Through Students and the International Services Office), the few statistical summaries which have emerged from these offices primarily focus on the nonimmigrant visa students (e.g., International Services Office, Note 1). Thus, we know even less about the immigrant subgroup at the U.W. This current report, then, will begin to fill this gap. However, before outlining the objectives of this paper, a bit of history seems warranted in order to better appreciate the intentions which motivated this study.

Initially, the focus of the investigation was to be quite specific, i.e., the relationship between UW academic performance and "demonstrated English proficiency" for the nonimmigrant students with F-1 visas. The intent was enlarged after considering two major points. First, while F-1 visa students are required by the US Immigration and Naturalization Service to demonstrate proficiency in English prior to enrolling at a US college (National Association for Foreign Student Affairs, Note 2), as a group these F-1 visa students are rather heterogeneous with respect to their degree of "preparedness." For example, F-1 students from a country where the "native" language was English (e.g., Great Britain) would more than likely have an easier time adjusting to University life than those for whom English was a "foreign" language (e.g., Korea), since a major factor in this adjustment process would be the ability to easily communicate with others, both in the classroom and off-campus. Therefore, it seemed that a more appropriate subgrouping would be whether or not English was the student's "mother tongue" rather than merely "lump" all nonimmigrant visa students under one umbrella.

The second consideration which broadened this study's scope was the growing number of Indochinese refugees in Washington State which now ranks fourth among all 50 states in its Indochinese population (Moriwaki, 1980). Refugees have immigrant visa status. However, unlike the nonimmigrant or F-1 visa students, there are no regulations for immigrants with respect to "demonstrated English proficiency" prior to enrolling in a US school. Here at the UW immigrants are admitted as if they are US citizens. It is possible that this current policy could be interpreted as "benign neglect" for those immigrant applicants who (1) had only been in the US for a very short period of time and/or (2) had a very limited command of the English language. In fact, it is not difficult to imagine a subset of nonimmigrant foreign F-1 visa undergraduates (for ex., those studying at the UW who are Canadian citizens) who would be more proficient in English than a recently settled Indochinese subgroup. Such being the case, it was decided to pool both immigrant and nonimmigrant subgroups and dichotomize the entire sample as follows---those from English-speaking countries versus those from non-English-speaking countries.

The emphasis of this report is twofold. First of all, since little data has been collected on our immigrant and nonimmigrant students, its primary purpose would be to fill this gap by profiling one cohort, that is, those entering the UW as new undergraduates in Autumn Quarter 1978, to answer such questions as these: (1) From what parts of the globe do these students hail? (2) What percentages are from English-speaking countries? (3) Prior to enrolling at the University, what proportions enter from each "standard" sending source (i.e., high school, community college, and four-year college/university)? The second purpose would be to examine the first-year UW academic performance of the two subsets (English-speaking versus non-English-speaking country of citizenry) from several perspectives, e.g., by last school attended, by residence classification (i.e., immigrant or nonimmigrant). By examining the same group of students from various "angles" it is anticipated that characteristics of those who experience academic "difficulty" during their first year at the University will be pinpointed. The information to be gleaned from this type of analysis should be of immense value to admissions officers and counselors who advise our non-citizen undergraduates, since special tutoring or counseling might be arranged for those subgroups identified as "less successful."

One important reminder for readers who might be tempted to contrast the academic performance of immigrants and nonimmigrants. Due to restrictions imposed by the US Immigration and Naturalization Service, nonimmigrant students with F-1 visas are required to enroll in a minimum number of credit hours each quarter (at the UW this is approximately 12 credit hours per quarter for undergraduates) and are also regulated as to their employment opportunities during their first-year of coursework at the UW (National Association for Foreign Student Affairs, Note 2). However, immigrants are not restricted either in their credit load nor in their employment options. Therefore, contrasts between immigrants and nonimmigrants are not advisable. Rather it is suggested that comparisons be made within each residence category, for example, comment on the differences and similarities of the two immigrant groups (English-speaking versus non-English-speaking) or of the two nonimmigrant subgroups.

Method

Sample. All non-citizen undergraduates entering the University as new students in Autumn Quarter 1978 comprised the group to be studied. Out of a total of 336 students about two-thirds were immigrants (N = 220) and one-third nonimmigrants (N = 116).

Variables. From UW records the following data were collected for each student: sex, country of citizenship, residence status, type of last school attended (high school, two-year college, four-year college), country of last school attended (US, foreign-Canadian, foreign-other than Canada), grade point average (GPA) from last school attended (that is, high school GPA for those entering directly from high school and college GPA for transfer students), number of transfer credits if collegiate transfer, admissions test data (if available), undergraduate class at time of entry, UW major at entry, and first-year UW cumulative credits and GPAs in six areas (humanities, social sciences, natural sciences, engineering, "other", and overall). For the nonimmigrant undergraduates data were also collected concerning demonstrated English proficiency assessed at time of entry: attended US school, attended Canadian school, Test of English as a Foreign Language (TOEFL) score, or "other." As noted earlier, immigrant students were not required to demonstrate English proficiency prior to entry.

Students in the total group represented over 50 different countries and two coding schemes were developed based on country of citizenship. First,

students were subdivided depending on whether or not English was the "mother tongue." Four countries (United Kingdom, Canada, Australia, and New Zealand) comprised the English-speaking subgroup. All other countries were included in the non-English-speaking subgroup. The second scheme was based on "region" of the globe: Africa, Near East, Americas, Asia, and Europe. Appendix A contains a complete listing of the specific countries included in each of these five areas.

Other data pertaining to English proficiency were computed as follows. Since the original intent of this report concerned the assessment of English proficiency prior to entry and subsequent UW performance, the verbal score from standard pre-college test batteries was considered to be an additional indicator of fluency. Therefore, for students with results from the Washington Pre-College (WPC) Test battery the Verbal Composite (VC) score was collected. For those lesser numbers of students with either Scholastic Aptitude Test (SAT) or American College Test (ACT) results, the verbal subtest scores (SAT-Verbal or ACT English, respectively) were converted to equivalent WPC Verbal Composite scores based on the following formulae derived from Greenmun (Note 3). For converting SAT-Verbal to WPC VC the following formula was used:

Predicted WPC VC = (.7511057)x(SAT-Verbal) + (17.89093).

And for converting ACT English score to a WPC VC equivalent the following formula was derived:

Predicted WPC VC = (1.6015756)x(ACT English) + (20.195983).

Lastly, in order to compare actual first-year UW cumulative GPA with expected performance, a predicted first-year UW cumulative GPA was computed for each student. First, for those having either SAT or ACT test results formulae from de Wolf (Note 4) were employed to obtain an equivalent to the WPC Total, i.e., sum of the WPC Verbal and Quantitative Composites. Then, using the appropriate prediction equations for the autumn 1978 entering class in Gillmore (Note 5) and de Wolf (Note 6) predicted first-year UW cumulative GPAs were computed based on WPC Total and prior GPA (that is, high school overall GPA for those entering directly from high school and transfer GPA for collegiate transfers). Table 1 summarizes all formulae employed, separately for each entrance group, and also indicates the specific reference source for each equation. However, in this group a few entrants who were expected to have admissions test data did not have test scores available in their admissions files. Therefore, predicted first-year UW cumulative GPAs for this group could not be computed via "standard" procedures; rather, an

Table 1

Standard Admissions Formulae to Compute Predicted First-Year UW Cumulative GPA Based on Prior GPA[a] and Washington Pre-College Test Scores, Separately for Entrance Groups

Equation #	Entrance Group	Formula based on prior GPA and test scores[a]	Reference source
1	High school entrants	(.6739)x(HS GPA) + (.0073)x(WPC Total) - (.2255)	Gillmore, Note 5
2	2-year transfers, fewer than transfer credits	(.4644)x(TR GPA)+ (.0144)x(WPC Total) - (.1911)	de Wolf, Note 6
3	2-year transfers, 75 or more transfer credits, transfer GPA 3.00 or higher[b]	(.8333)x(TR GPA)+ (.1451)	Gillmore, Note 5
4	2-year transfers, 75 or more transfer credits	(.7555)x(TR GPA)+ (.0055)x(WPC Total) - (.1889)	Gillmore, Note 5
5	4-year transfers, fewer than 75 transfer credits	(.7125)x(TR GPA) + (.0056)x(WPC Total) + (.1259)	de Wolf, Note 6
6	4-year transfers, 75 or more transfer credits, transfer GPA 2.85 or higher[b]	(.7141)x(TR GPA) + (.8625)	Gillmore, Note 5
7	4-year transfers, 75 or more transfer credits	(.6761)x(TR GPA) + (.0022)x(WPC Total) + (.7378)	Gillmore, Note 5

[a]Prior GPA was high school GPA (HS GPA) and transfer GPA (TR GPA) for high school entrants and collegiate transfers, respectively. The Washington Pre-College Test score equalled the sum of the Verbal and Quantitative Composites (WPC Total).

[b]Applicants in this entrance group were exempted from having to provide admissions test scores.

Table 2

Formulae to Compute Predicted First-Year UW Cumulative GPA Employed When Admissions Test Data Were Not Available and Standard Admissions Formulae in Table 1 Could not be Used, Separately for Entrance Groups

Equation #	Table 1 replacement	Formula based solely on prior GPA[a]
8	Equation # 1	(.8289)x(HS GPA) + (.0599)
9	Equation # 2	(.5905)x(TR GPA) + (.8985)
10	Equation # 4	(.8333)x(TR GPA) + (.1451)
11	Equation # 5	(.8177)x(TR GPA) + (.4098)
12	Equation # 7	(.7141)x(TR GPA) + (.8625)

[a]Prior GPA was high school GPA (HS GPA) and transfer GPA (TR GPA) for high school entrants and collegiate transfers, respectively.

additional set of prediction equations based solely on prior GPA had to be developed. Based on data contained in Gillmore (Note 5) formulae were then developed, a separate formula for each of five admissions categories, and these reported in Table 2. Table 2 should be interpreted as follows: if a high school entrant did not have admissions test data and, consequently, Equation # 1 in Table 1 could not be used to obtain the student's predicted first-year UW cumulative GPA, then Equation # 8 in Table 2 was employed. Similarly, if Equation # 2 in Table 1 was the "standard" admissions formula to be used, but test data were not available, Equation # 9 in Table 2 was subsequently used to compute predicted first-year UW cumulative GPA, etc.

Analyses. Using the two language-based subgroups (English-speaking versus non-English-speaking) as the breakout variable, the entire sample was profiled on the background and performance variables listed above. In addition, a crosstabulation of WPC Verbal Composite (or its equivalent) and first-year UW cumulative GPA was presented. Next, for the two language-based subgroups mean WPC Verbal Composite and mean GPAs (actual first-year cumulative, predicted first-year cumulative, and the difference between actual and predicted) were computed for each level of five variables: type of admissions test, last school attended, residence category, "region of the globe" for last school attended and region for country of citizenship. Lastly, only for the nonimmigrant visa students, information pertinent to "demonstrated English proficiency" was summarized.

Results

For the entire group, 26% were from English-speaking countries (N = 89), while the bulk (74% or N = 247) came from non-English-speaking countries. Table 3 presents the distribution by residence classification at time of admission to the UW, separately for each language group. For both groups the proportions of immigrants and nonimmigrants were quite similar with nearly 60% of each classified as resident immigrants (N = 51 and N = 148 of the English-speaking and non-English-speaking groups, respectively). Next, Table 4 presents the distribution by "world region" for country of citizenship, again separately for each language group. For the English-speaking subgroup, the majority of entrants were Canadian citizens (61% or N = 54); Canada being the only English-speaking country in the "Americas" category. As for the non-English-speaking subgroup, the highest concentration of entrants were citizens of Asian countries (66% or N = 162).

Table 3

Number of Students by Residence Classification at Time of Entry to the University, Separately for Each Language Group

Residence Category	Language Group					
	English		Non-English		Total	
	N	(%)	N	(%)	N	(%)
Immigrant, resident	51	(57%)	148	(60%)	199	(59%)
Immigrant, non-resident	5	(6%)	16	(6%)	21	(6%)
Nonimmigrant, F-1 visa	33	(37%)	76	(31%)	109	(32%)
Ninimmigrant, other than F-1 visa	--		7	(3%)	7	(2%)
Total	89	(100%)	247	(100%)	336	(100%)

Note. Immigrants who have been domiciled in the State of Washington for at least one year after the data of application for their immigrant visas are classified as "resident students" and are entitled to pay resident tuition and fees. All other immigrants are classified as "non-resident students" and pay non-resident tuition and fees.

Table 4

Number of Students by World Region for Country of Citizenship, Separately for Each Language Group

World Region	Language Group					
	English		Non-English		Total	
	N	(%)	N	(%)	N	(%)
Africa	--		11	(4%)	11	(3%)
Near East	--		31	(13%)	31	(9%)
Americas	54	(61%)	18	(7%)	72	(21%)
Asia	3	(3%)	162	(66%)	165	(49%)
Europe	32	(36%)	25	(10%)	57	(17%)
Total	89	(100%)	247	(100%)	336	(100%)

A more in depth look at the figures which generated both Tables 3 and 4 revealed that in this cohort there was a smaller proportion of students from Near Eastern countries than would be expected. That is, a recently released nationwide survey (Arab Enrollment in U.S., 1980) reported that nearly one-third of the total population of foreign students in the United States were from nations which are members of the Organization of Petroleum Exporting Countries. For the total group of 31 Near Eastern students (from Table 4), 9 were classified as immigrants and the remaining 22 classified as nonimmigrants. Therefore, among the total group of immigrant visa students (from Table 3, N = 220) only 4% were citizens of Near Eastern countries, while in the nonimmigrant group (from Table 3, N = 116) the students from Near Eastern countries comprised 19%.

Table 5 presents the proportion of males and females in each language group. These two groups did not differ with males comprising the majority, i.e., 56% (N = 187) of the total group of foreign undergraduates.

Academic data prior to enrolling at the University are presented in Tables 6, 7, and 8. With respect to country in which the student's last school attended was located, the bulk (over 3/4's) had enrolled in an institution in the United States before being admitted to the UW as Table 6 indicates. However, as Table 7 reports the two language groups did differ regarding the distribution of "last school attended" (i.e., high school, community college, or four-year college/university), particularly with respect to the predominant sending source for collegiate transfers. While nearly half of both language groups entered the UW directly from high school, for the English-speaking subgroup the majority of collegiate transfers came from 4-year institutions (21% and 29% of the total group came from 2-year and 4-year colleges, respectively), whereas for the non-English-speaking subgroup the largest proportion of collegiate transferscame from 2-year institutions (38% and 17% of the total group entered from 2-year and 4-year colleges, respectively). Table 8 presents the third pre-entry academic data set, i.e., mean GPAs and transfer credits separately for each sending source within each language group. While the two language groups did not differ on either performance variable for the 2-year transfers (mean transfer GPA about 3.15 and mean transfer credits nearly 78) nor on mean transfer credits for the 4-year transfers (approximately 84), the mean GPAsdid differ for those entering from high school or from a 4-year college. For those entering directly from high school the English-speaking subgroup had the

Table 5

Number of Males and Females, Separately for Each Language Group

Gender	Language Group					
	English		Non-English		Total	
	N	(%)	N	(%)	N	(%)
Males	45	(51%)	142	(57%)	187	(56%)
Females	44	(49%)	105	(43%)	149	(44%)
Total	89	(100%)	247	(100%)	336	(100%)

Table 6

Country of Last School Attended, Separately for Each Language Group

Country	Language Group					
	English		Non-English		Total	
	N	(%)	N	(%)	N	(%)
Omitted	--		2	(1%)	2	(1%)
United States	68	(76%)	212	(86%)	280	(83%)
Foreign, Canada	18	(20%)	3	(1%)	21	(6%)
Foreign, other	3	(3%)	30	(12%)	33	(10%)
Total	89	(100%)	247	(100%)	336	(100%)

Table 7

Last School Attended, Separately for Each Language Group

Sending Source	Language Group					
	English		Non-English		Total	
	N	(%)	N	(%)	N	(%)
High School	44	(49%)	111	(45%)	155	(46%)
2-year	19	(21%)	93	(38%)	112	(33%)
4-year	26	(29%)	43	(17%)	69	(21%)
Total	89	(100%)	247	(100%)	336	(100%)

higher mean GPA (3.29 versus 3.17 for English- and non-English-speaking groups, respectively), while for the 4-year transfers the non-English-speaking subgroup had the higher mean (2.97 versus 3.14 for the English- and non-English-speaking subgroups, respectively). Lastly, within each language group the mean GPA for the 2-year transfers surpassed that for the 4-year transfers as would be hypothesized from de Wolf's earlier studies (Note 5, Note 7, Note 8).

Now let's focus on the UW data for this group of students. At the time of entry into the University these two language groups did not differ with respect to either undergraduate class nor area of intended major. Table 9 presents data pertaining to undergraduate class; over half were freshmen at time of admissions with one-quarter having sophomore standing. Undergraduate majors were grouped into seven broad categories five of which encompass declared majors (humanities, natural sciences, social sciences, engineering, and "other"), while the remaining twowere undeclared majors (pre-Business Administration; Pre-Arts and Sciences). Appendix B contains a list of the specific majors included in each area. Regardless of language group, the majority of entrants had not declared a major at time of entry (overall about 57% indicated that they were pre-majors either in the College of Business Administration or in the College of Arts and Sciences). Among the declared, majors in the College of Engineering predominated (accounting for about 20% of the total group).

With respect to the availability of pre-college admissions test data, Table 11 indicates that the two language groups differed with over 80% ($\underline{N}$ = 73) of the English-speaking group having test data while slightly less, 60%, ($\underline{N}$ = 148) of the non-English-speaking group had scores available. However, in both groups for those with pre-college scores available the largest percentage had WPC results and the smallest ACT results (52% and 6% of the total English-speaking group had WPC and ACT results, respectively; 39% and 2% of the non-English-speaking group had WPC and ACT scores, respectively).

For those entrants with either SAT or ACT admissions test scores, the verbal subtest scores (SAT-Verbal or ACT English, respectively) were then converted to equivalent WPC Verbal Composite scores using the formulae presented earlier. These WPC Verbal Composite scores were aggregated in blocks of 10 (i.e., 20-29, 30-39, etc.) and distributed against first-year

Table 8

Academic Performance Variables by Sending Source, Separately for Each Language Group

Academic Variable and Source		Language Group					
		English			Non-English		
		N	M	SD	N	M	SD
GPA:	High school	44	3.29	.64	111	3.17	.51
	2-year	19	3.16	.60	93	3.15	.51
	4-year	26	2.97	.39	43	3.14	.63
Transfer credits:	2-year	19	78.0	27.8	93	77.7	33.8
	4-year	26	82.4	35.5	43	84.6	50.0

Note. Abbreviations are as follows: number (N), mean (M) and standard deviation (SD).

Table 9

Undergraduate Class at Time of Admissions, Separately for Each Language Group

Class	Language Group					
	English		Non-English		Total	
	N	(%)	N	(%)	N	(%)
Freshman	49	(55%)	128	(52%)	177	(53%)
Sophomore	24	(27%)	70	(28%)	94	(28%)
Junior	15	(17%)	45	(18%)	60	(18%)
Senior	1	(1%)	4	(2%)	5	(1%)
Total	89	(100%)	247	(100%)	336	(100%)

Table 10

Area of Undergraduate Major at Time of Admissions,
Separately for Each Language Group

Major Area	Language Group					
	English		Non-English		Total	
	N	(%)	N	(%)	N	(%)
Humanities	3	(3%)	8	(3%)	11	(3%)
Natural Sciences	10	(11%)	28	(11%)	38	(11%)
Social Sciences	5	(6%)	4	(2%)	9	(3%)
Engineering	17	(19%)	55	(22%)	72	(21%)
"Other"	5	(6%)	10	(4%)	15	(4%)
Pre-Bus. Admin.	10	(11%)	14	(6%)	24	(7%)
Pre-Arts & Sci.	39	(44%)	128	(52%)	167	(50%)
Total	89	(100%)	247	(100%)	336	(100%)

Note. Specific majors included in each area can be found in Appendix B.

Table 11

Proportion Having Admissions Test Scores at Time of Entry,
Separately for Each Language Group

Test Information	Language Group					
	English		Non-English		Total	
	N	(%)	N	(%)	N	(%)
None available	16	(18%)	99	(40%)	115	(34%)
Available:						
WPC Test	46	(52%)	96	(39%)	142	(42%)
SAT	22	(25%)	47	(19%)	69	(21%)
ACT	5	(6%)	5	(2%)	10	(3%)
Total	89	(100%)	247	(100%)	336	(100%)

UW cumulative GPA which was also blocked (i.e., less than 2.00, 2.00-2.49, etc.). Tables 12 and 13 present the crosstabulation of WPC Verbal Composite scores with UW cumulative GPA for the English-speaking and non-English-speaking subgroups, respectively. The English-speaking subgroup had a higher Verbal Composite mean than the non-English-speaking subgroup (51.9 versus 40.6) and greater variability (standard deviation or SD of 11.8 versus 9.2). However, regardless of language group, higher GPAs were associated with higher Verbal Composite scores.

Table 14 presents the mean first-year cumulative UW GPA and first-year cumulative UW credits in six course areas (humanities, social science, natural science, engineering, "other," and cumulative), separately for each language group. Appendix B lists specific departments included in each of these areas. The "credits" variable was the sum of both graded and ungraded coursework (such as, credit/no credit classes) with each mean based on the entire group of students. In contrast, GPA means were calculated solely on graded coursework and based only on the actual number of students having taken graded courses in each area. Since these variables were based on different types of courses and different samples, it is recommended that the reader not juxtapose mean GPA and mean credits for the same course area but, instead, keep GPAs distinct from credits when reading Table 14. Overall, the English-speaking subgroup earned higher GPAs and accumulated a greater number of credits during their first year at the University when contrasted with the non-English-speaking subgroup (2.90 versus 2.75 for mean GPAs and 36.8 versus 33.9 for mean credits, respectively). Area by area, the mean GPAs for the non-English-speaking group were higher for the two areas of humanities and natural science (2.93 versus 2.95 mean GPAs in humanities and 2.57 versus 2.67 mean GPAs in natural science for the English- and non-English-speaking subgroups, respectively), while the English-speaking group earned higher means in the remaining three coursework areas with the most notable difference in the "other" coursework area, a miscellaneous group reflecting business administration, education, and architecture courses (GPA means of 3.29 versus 2.80 for the English- and non-English-speaking groups, respectively).

The following five Tables, Tables 15-19, are the "heart" of this study and contrast actual and predicted first-year UW mean cumulative GPAs, separately for each language group, where each Table presents the same

Table 12

Crosstabulation of WPC Verbal Composite with First-Year UW Cumulative GPA, Only for English-speaking Subgroup with Admissions Test Scores

Cum 1st-year-----Washington Pre-College Verbal Composite or its Equivalent--------

UW GPA	20-29		30-39		40-49		50-59		60-69		70+		Total	
	N	(%)	N	(%)	N	(%)	N	(%)	N	(%)	N	(%)	N	(%)
less than 2.00	1	(33%)	1	(11%)	1	(7%)	1	(4%)	1	(6%)	--		5	(7%)
2.00-2.49	1	(33%)	3	(33%)	3	(21%)	4	(15%)	3	(18%)	--		14	(19%)
2.50-2.99	--		3	(33%)	4	(29%)	11	(42%)	5	(29%)	1	(33%)	24	(33%)
3.00-3.49	1	(33%)	2	(22%)	4	(29%)	8	(31%)	6	(35%)	1	(33%)	22	(31%)
3.50+	--		--		2	(14%)	2	(8%)	2	(12%)	1	(33%)	7	(10%)
Total	3	(100%)	9	(100%)	14	(100%)	26	(100%)	17	(100%)	3	(100%)	72	(100%)

Table 13

Crosstabulation of WPC Verbal Composite with First-Year UW Cumulative GPA, Only for Non-English-Speaking Subgroup with Admissions Test Scores

Cum 1st-year-----Washington Pre-College Verbal Composite or its Equivalent--------

UW GPA	20-29		30-39		40-49		50-59		60-69		Total	
	N	(%)	N	(%)	N	(%)	N	(%)	N	(%)	N	(%)
less than 2.00	1	(11%)	7	(12%)	2	(4%)	2	(11%)	--		12	(8%)
2.00-2.49	2	(22%)	15	(26%)	13	(25%)	1	(5%)	1	(17%)	32	(22%)
2.50-2.99	6	(67%)	20	(34%)	13	(25%)	4	(21%)	2	(33%)	45	(31%)
3.00-3.49	--		13	(22%)	16	(31%)	4	(21%)	1	(17%)	34	(24%)
3.50+	--		3	(6%)	8	(15%)	8	(42%)	2	(33%)	21	(15%)
Total	9	(100%)	58	(100%)	52	(100%)	19	(100%)	6	(100%)	144	(100%)

Table 14

Mean (M) and Standard Deviation (SD) of First-Year Cumulative UW GPA and Cumulative UW Credits by Course Area, Separately for Each Language Group

Variable and Course Area		Language Group					
		English			Non-English		
		N	M	SD	N	M	SD
GPA:	Humanities	64	2.93	.81	160	2.95	.80
	Social Science	59	2.92	.60	124	2.50	.88
	Natural Science	64	2.57	.87	193	2.67	.86
	Engineering	22	2.95	.91	69	2.79	.83
	"Other"	18	3.29	.59	37	2.80	1.02
	Cumulative	88	2.90	.58	237	2.75	.66
Credits:	Humanities	88	10.6	9.3	237	10.5	9.9
	Social Science	88	7.7	7.7	237	5.1	6.9
	Natural Science	88	11.9	10.8	237	12.6	10.9
	Engineering	88	3.3	8.3	237	4.1	9.1
	"Other"	88	3.2	9.0	237	1.7	5.8
	Cumulative	88	36.8	10.0	237	33.9	12.1

Note. Appendix B lists the specific course areas included in each of the five coursework groups. The "credits" variable is the sum of both graded and ungraded coursework (such as, credit/no credit classes) and each mean is based on the entire group of students. In contrast, GPA means are based solely on graded coursework and they are based only on the actual number of students having taken graded coursework in each area.

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type of analyses but employs a different breakout variable. First, Table 15 presents the mean actual and mean predicted first-year UW cumulative GPAs for each residence category (i.e., immigrant resident; immigrant, non-resident; nonimmigrant, F-1 visa; and nonimmigrant, visa other than an F-1), separately for each language group. With respect to actual mean cumulative GPA, the immigrants in either language group did not differ (about 2.75 mean GPA for resident immigrants and 3.01 mean GPA for non-resident

immigrants). However, the F-1 visa students in the two language groups differed with the English-speaking group having a higher mean GPA than those from non-English-speaking countries (3.12 versus 2.80). In fact, the F-1 visa students from English-speaking countries had the highest mean GPA among all residence categories. At the other end of the continuum, the lowest mean GPA (2.24) was achieved by the nonimmigrant students having other than a F-1 visa, all of whom were from non-English-speaking countries. While mean predicted GPAs for each residence classification were included as individual entries in Table 15, the most advantageous perspective for viewing this variable would be to contrast it with actual performance. Consequently, this difference (i.e., actual mean GPA - predicted mean GPA) is also included in Table 15 where a positive entry, therefore, indicates that the mean actual GPA exceeded the mean predicted GPA. There are three "differences" which bear mentioning: (1) the English-speaking, F-1 visa students achieved an actual mean GPA which was .35 higher than predicted (3.12 actual versus 2.79 predicted); (2) the non-English-speaking immigrants who were not residents of Washington State achieved an actual mean GPA which was .22 higher than predicted (3.01 actual versus 2.79 predicted); and (3) the nonimmigrant students having other than a F-1 student visa did .29 lower than expected (2.24 actual versus 2.53 predicted). The last variable included in Table 15 is WPC Verbal Composite mean (or equivalent computed from either SAT-Verbal or ACT English). Remember that not all entrants had pre-college test data and, consequently, the means for WPC Verbal Composite scores do not reflect the total groups of students in each residence category. With this limitation in mind, among the residence categories for the English-speaking group, those classified as resident immigrants achieved a higher mean (M = 53) than either the non-resident immigrants or the F-1 visa students (means of about 50). In the non-English-speaking group, nonimmigrants with other than a F-1 visa had a relatively lower mean WPC Verbal Composite (approx. 36) in contrast with the means for the other three residence categories (nearly 40). This data, therefore, suggests one possible factor contributing to the relatively lower mean first-year UW cumulative GPA for this nonimmigrant, "other visa" subgroup might be the comparatively lesser degree of preparedness or fluency in English.

Table 16 presents mean UW GPAs (actual and predicted) and mean WPC Verbal Composite scores with the breakout variable being last school attended (high school, 2-year college, 4-year college), separately for each language group. For both language groups, the rank order for GPA means was identical with the 4-year transfers having earned the highest mean GPA, followed by the 2-year transfers, and then by the high school entrants (3.05, 3.04, and 2.75 for the English-speaking group, respectively; 2.93, 2.75, and 2.68 for the non-English-speaking group, respectively). In contrasting actual and predicted first-year UW cumulative GPAs, only did the 2-year transfers in the English-speaking language group "stand out" having earned a mean GPA .17 higher than predicted (3.04 actual versus 2.87 predicted). As for the WPC Verbal Composite data, this same group once again excelled by having a comparatively higher mean (M = 55 for 2-year transfers) in contrast to the means for the other two sending sources in the English-speaking language group.

Before proceeding to the remaining Tables which continue to document differences in actual and predicted first-year University performance, it would be instructive to concentrate briefly on the two transfer groups in Table 16. Let's compare each first-year UW mean GPA in Table 16 with the corresponding mean transfer GPA in Table 8. And as would be hypothesized based from previous research on University transfer students (de Wolf, Note 5, Note 7, Note 8), the transfer GPAs for the 2-year entrants were higher than the transfer GPAs for the 4-year entrants but the ordering of first-year UW GPAs was reversed with those from 4-year institutions having the higher mean. In addition, the 2-year transfers demonstrated the greater "drop" in mean performance with 2-year transfers from non-English-speaking countries having the largest difference (i.e., 3.15 mean transfer GPA down to a 2.75 mean first-year UW cum GPA). Viewing Tables 8 and 16 together revealed that the "best" GPA performance was noted for 4-year transfers in the English-speaking group who had the lowest mean transfer GPA (2.97) but earned the highest first-year UW cumulative GPA (3.05) and, in fact, was the only group to experience an increase in mean GPA performance.

Turning now to Table 17 which employed "country of last school attended" as the breakout variable , we find that within each language group those entering from United States schools earned the lowest mean first-year cumulative GPAs (2.81 and 2.71 for English- and non-English-speaking language groups, respectively). Of course, these two cells did contain the majority of all entrants. However, it is interesting to note that all of the remaining categories achieved mean first-year GPAs much higher than predicted. One should not be too hasty in generalizing this to future cohorts of foreign entrants, since three of

Table 15

Means (M) and Standard Deviations (SD) for Selected Performance Variables by Residence Category, Separately for Each Language Group

Variable	Residence Category	Language Group: English			Language Group: Non-English		
		N	M	SD	N	M	SD
WPC Verbal Composite or Equivalent[a]	Immig., res.	46	53.0	10.4	91	40.4	9.8
	Immig., non-res.	5	50.4	16.6	10	39.6	10.2
	Nonimmig., F-1	22	50.1	12.9	44	41.6	7.4
	Nonimmig., "other"	--	--	--	3	35.7	8.0
	Total	73	51.9	11.8	148	40.6	9.2
Actual 1st-year UW cum GPA	Immig., res.	51	2.75	.63	141	2.72	.64
	Immig., non-res.	5	3.01	.34	15	3.01	.45
	Nonimmig., F-1	32	3.12	.45	74	2.80	.69
	Nonimmig., "other"	--	--	--	7	2.24	.70
	Total	88	2.90	.58	237	2.75	.66
Predicted 1st-year UW cum GPA	Immig., res.	51	2.88	.44	148	2.68	.44
	Immig., non-res.	5	2.91	.34	16	2.79	.40
	Nonimmig., F-1	33	2.79	.39	76	2.82	.46
	Nonimmig., "other"	--	--	--	7	2.53	.22
	Total	89	2.85	.42	247	2.73	.44
UW GPA Difference = Actual - predicted	Immig., res.	51	-.14	.62	141	.03	.62
	Immig., non-res.	5	.10	.21	15	.22	.61
	Nonimmig., F-1	32	.35	.35	74	-.01	.79
	Nonimmig., "other"	--	--	--	7	-.29	.62
	Total	88	.05	.57	237	.02	.68

Note. Residence categories are abbreviated as follows: immigrant, resident (immig., res.), immigrant, non-resident (immig., non-res.), nonimmigrant, F-1 visa (nonimmig., F-1), and nonimmigrant, visa other than F-1 (nonimmig., "other").

[a]Caution is advised in interpreting these data since only 82% (73 out of 89) of the English-speaking group and only 60% (148 out of 247) of the non-English-speaking group had test score results.

Table 16

Means (M) and Standard Deviations (SD) for Selected Performance Variables by Last School Attended, Separately for Each Language Group

Variable	Sending Source	Language Group					
		English			Non-English		
		N	M	SD	N	M	SD
WPC Verbal Composite or Equivalent[a]	High School	43	50.1	12.7	92	39.5	8.6
	2-year	15	55.1	11.7	42	41.8	10.1
	4-year	15	53.8	7.5	14	43.7	8.8
	Total	73	51.9	11.8	148	40.6	9.2
Actual 1st-year UW cum GPA	High School	44	2.75	.61	107	2.68	.72
	2-year	19	3.04	.56	90	2.75	.60
	4-year	25	3.05	.48	40	2.93	.59
	Total	88	2.90	.58	237	2.75	.66
Predicted 1st-year UW cum GPA	High School	44	2.79	.48	111	2.60	.42
	2-year	19	2.87	.42	93	2.74	.37
	4-year	26	2.95	.26	43	3.04	.49
	Total	89	2.85	.42	247	2.73	.44
UW GPA Difference = Actual-Predicted	High School	44	-.04	.65	107	.08	.69
	2-year	19	.17	.47	90	.01	.63
	4-year	25	.12	.42	40	-.11	.74
	Total	88	.05	.57	237	.02	.68

[a]See corresponding footnote in Table 15 regarding limitation in interpreting these data.

these remaining five categories had N's which were 3 or less while the other two categories were modest in size (N's of 18 and 29). This current breakout variable, i.e., "country of last school attended," would seem to merit further investigation in future studies.

Rather than "country of last school attended", country of citizenship was considered as an alternative breakout variable. Table 18 presents the series of performance variables for this breakout, again separately for each language group. With respect to actual first-year UW cumulative GPA those from the Americas had the highest mean in the English group (M = 2.92), while in the non-English group Europeans achieved the highest mean (M = 2.88). In contrasting actual and predicted means, three differences were noted: non-English speakers from the Americas achieved a mean .22 higher than predicted (2.73 actual and 2.51 predicted); Africans, all of whom were in the non-English language group, achieved a mean GPA .21 lower than predicted (2.55 actual and 2.72 predicted); and, lastly, English-speakers from Asian countries had a mean .16 lower than predicted (2.62 actual and 2.78 predicted). The two most "superior" means for WPC Verbal Composite data were found in this Table. Asians in the English group had a relatively higher WPC Verbal mean than the total English group (approx. 57 and 52, respectively), while a comparable superior performance was achieved by Europeans in the non-English group (means of 48 and 42 for the Europeans and the total non-English group, respectively).

Table 19 presents the fifth, and final, performance profile for this group of autumn 1978 foreign undergraduates where pre-college admissions test was the breakout variable (Washington Pre-College Test, Scholastic Aptitude Test, American College Test, and no test data available). First, with respect to actual mean first-year UW cumulative GPA the ranking of students in each of the language groups differed particularly for those having ACT results (N = 5 in both English- and non-English-speaking groups). For the English language group the highest mean first-year UW GPA was achieved by those without test data (M = 3.18) and the lowest by those with ACT results (M = 2.48). In contrast, for the non-English group those with ACT results achieved the highest first-year mean (M = 3.27) and those with WPC results the lowest (M = 2.66). The comparison of actual and predicted mean GPAs produced four contrasts worthy of mention: non-English-speaking entrants with ACT results had a mean GPA .55 higher than predicted

Table 17

Means (M) and Standard Deviations (SD) for Selected Performance Variables by Country of Last School Attended, Separately for Each Language Group

Variable	Country of Last School	Language Group: English			Language Group: Non-English		
		N	M	SD	N	M	SD
WPC Verbal Composite or Equivalent[a]	Omitted	--	--	--	2	36.0	2.0
	United States	58	52.4	11.7	215	40.3	9.3
	Foreign, Canada	14	50.1	12.4	1	40.0	0.0
	Foreign, Other	1	46.0	0.0	20	42.7	8.3
	Total	73	51.9	11.8	148	40.6	9.2
Actual 1st-year UW cum GPA	Omitted	--	--	--	2	3.42	.34
	United States	68	2.81	.60	203	2.71	.66
	Foreign, Canada	18	3.14	.43	3	3.14	.29
	Foreign, Other	2	3.56	.05	29	2.97	.62
	Total	88	2.90	.58	237	2.75	.66
Predicted 1st-year UW cum GPA	Omitted	--	--	--	2	2.52	.63
	United States	68	2.88	.43	212	2.75	.40
	Foreign, Canada	18	2.70	.35	3	2.98	.21
	Foreign, Other	3	3.14	.22	30	2.58	.65
	Total	89	2.85	.42	247	2.73	.44
UW GPA Difference = Actual - Predicted	Omitted	--	--	--	2	.90	.29
	United States	68	-.07	.58	203	-.04	.65
	Foreign, Canada	18	.44	.28	3	.16	.50
	Foreign, Other	2	.57	.04	29	.39	.73
	Total	88	.05	.57	237	.02	.68

[a]See corresponding footnote in Table 15 regarding limitations in interpreting these data.

Table 18

Means (M) and Standard Deviations (SD) for Selected Performance Variables by World Region for Country of Citizenship, Separately for Each Language Group

Variable	World Region	Language Group: English			Language Group: Non-English		
		N	M	SD	N	M	SD
WPC Verbal Composite or Equivalent[a]	Africa	--	--	--	3	43.0	3.3
	Near East	--	--	--	19	37.5	6.4
	Americas	47	52.3	11.0	12	42.0	8.4
	Asia	3	57.3	6.1	98	39.7	9.0
	Europe	23	50.5	13.5	16	48.0	10.0
	Total	73	51.9	11.8	148	40.6	9.2
Actual 1st-year UW cum GPA	Africa	--	--	--	9	2.55	.87
	Near East	--	--	--	30	2.69	.66
	Americas	54	2.92	.52	18	2.73	.54
	Asia	3	2.62	.27	156	2.76	.66
	Europe	31	2.88	.70	24	2.88	.62
	Total	88	2.90	.58	237	2.75	.66
Predicted 1st-year UW cum GPA	Africa	--	--	--	11	2.72	.51
	Near East	--	--	--	31	2.79	.29
	Americas	54	2.84	.36	18	2.51	.66
	Asia	3	2.78	.13	162	2.71	.44
	Europe	32	2.88	.51	25	2.91	.29
	Total	89	2.85	.42	247	2.73	.44
UW GPA Difference = Actual - Predicted	Africa	--	--	--	9	-.21	1.01
	Near East	--	--	--	30	-.09	.67
	Americas	54	.09	.46	18	.22	.74
	Asia	3	-.16	.37	156	.04	.64
	Europe	31	.01	.72	24	-.02	.68
	Total	88	.05	.57	237	.02	.68

[a]See corresponding footnote in Table 15 regarding limitations in interpreting these data.

Table 19

Means (M) and Standard Deviations (SD) for Selected Performance Variables by Type of Admissions Test, Separately for Each Language Group

Variable	Admissions Test	English			Non-English		
		N	M	SD	N	M	SD
WPC Verbal Composite or Equivalent[a]	None	--	--	--	--	--	--
	WPC	46	53.2	10.8	96	39.8	9.2
	SAT	22	52.0	9.7	47	42.6	8.1
	ACT	5	39.2	19.3	5	35.6	13.1
	Total	73	51.9	11.8	148	40.6	9.2
Actual 1st-year UW cum GPA	None	15	3.18	.47	93	2.73	.63
	WPC	46	2.77	.62	93	2.66	.72
	SAT	22	3.06	.46	46	2.92	.55
	ACT	5	2.48	.47	5	3.27	.56
	Total	88	2.90	.58	237	2.75	.66
Predicted 1st-year UW cum GPA	None	16	3.01	.21	99	2.85	.47
	WPC	46	2.88	.46	96	2.62	.38
	SAT	22	2.79	.30	47	2.70	.46
	ACT	5	2.36	.55	5	2.76	.14
	Total	89	2.85	.42	247	2.73	.44
UW GPA Difference = Actual - Predicted	None	15	.20	.45	93	-.11	.67
	WPC	46	-.11	.61	93	.03	.72
	SAT	22	.26	.47	46	.22	.55
	ACT	5	.12	.43	5	.51	.42
	Total	88	.05	.57	237	.02	.68

Note. Test abbreviations are as follows: Washington Pre-College Test battery (WPC), Scholastic Aptitude Test (SAT), and American College Test (ACT).

[a]See corresponding footnote in Table 15 regarding limitations in interpreting these data.

(3.27 actual and 2.76 predicted); the English-speaking group with SAT scores had a mean which was .26 higher than predicted (3.06 actual and 2.79 predicted); the SAT group in the non-English did equally as well as the English group having achieved a mean first-year UW GPA .22 higher than predicted (2.92 and 2.62 for actual and predicted means, respectively); and, finally, English speakers without test results earned a mean first-year GPA which was .20 higher than predicted (3.18 actual and 3.01 predicted). Lastly, in both language groups students with ACT results had WPC Verbal Composite means which were lower than the corresponding means for the total group, especially for the English-speaking subgroup (for the English speakers the means were approximately 39 and 52 for the ACT subgroup and total group, respectively; for the non-English-speaking group the similar means were 36 and 41, respectively).

The final presentation, Tables 20 and 21, are relevant only for non-immigrants (N = 116) since both pertain to satisfaction of the English proficiency requirement prior to entering the UW. Again the data is presented separately for each language group. As mentioned earlier there were five alternatives by which this requirement could be satisfied: attended a US school prior to enrolling at the UW, attended a Canadian school prior to University enrollment, submitted scores from the Test of English as a Foreign Language (TOEFL), "other", and, lastly, did not demonstrate English proficiency. First, in Table 20, the most surprising finding was the comparatively small percentage of nonimmigrants who submitted TOEFL scores to satisfy the proficiency requirement (N = 37 or 32% of the total group). Over 50% of each language group established English proficiency by having attended either a US or Canadian school prior to enrolling at the University. However, the language groups differed with respect to their top-ranked choice. For the English-speaking group entering from a Canadian institution was the most preferred alternative (N = 14 or 42%), while the largest proportion of the non-English-speaking group entered from a United States school (N = 38 or 46%).

The final presentation, Table 21, examines the academic performance of the nonimmigrants using English proficiency as the breakout variable, separately for each language group. Before discussing the entries in this Table, a word of warning. Since some of the cells in Table 21 have quite small frequencies, caution is advised in the degree to which one can

Table 20

Demonstrated English Proficiency Among Nonimmigrant Visa Students, Separately for Each Language Group

Proficiency	Language Group					
	English		Non-English		Total	
	N	(%)	N	(%)	N	(%)
None	7	(21%)	9	(11%)	16	(14%)
Attended United States School	6	(18%)	38	(46%)	44	(38%)
Attended Canadian School	14	(42%)	3	(4%)	17	(15%)
TOEFL[a]	6	(18%)	31	(37%)	37	(32%)
Other	--		2	(2%)	2	(2%)
Total	33	(100%)	83	(100%)	116	(100%)

[a]TOEFL is the abbreviation for Test of English as a Foreign Language.

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confidently generalize to subsequent members of these "small sample proficiency" groups until a larger data base exists. However, a few fruitful avenues to be explored in future research can be derived from Table 21. Overall, all English-speaking proficiency groups did quite well both in regards to actual GPA means (which ranged from a low of 3.05 for the TOEFL subgroup to a high of 3.18 for those without an indicator of English proficiency) and in the comparison between actual and predicted mean GPAs (which were all relatively high and positive--indicating that all proficiency groups achieved higher mean GPAs than predicted). On the other hand, the non-English-speaking proficiency groups differed among themselves rather dramatically. With respect to mean first-year GPAs the range was quite broad from a low of 2.55 (for those without an indicator of English proficiency) to a high of 3.51 (for those in the "other" category, a small group of merely 2 people). With regards to the difference between actual and predicted performance similar extremes were found: those in the "other" proficiency group achieved a mean GPA which was .65 higher than predicted (3.51 actual and 2.86 predicted),

Table 21

Means (M) and Standard Deviations (SD) for Selected Performance Variables By Demonstrated English Proficiency Among Nonimmigrant Visa Students, Separately for Each Language Group

Variable	Proficiency	Language Group					
		English			Non-English		
		N	M	SD	N	M	SD
WPC Verbal Composite or Equivalent[a]	None	4	54.8	20.6	4	40.8	11.2
	US school	2	44.5	11.5	21	38.5	6.6
	Canad. sch.	11	53.8	8.7	1	40.0	--
	TOEFL	5	40.2	3.3	20	43.8	6.7
	Other	--	--	--	1	48.0	--
	Total	22	50.1	12.9	47	41.2	7.5
Actual 1st-year UW cum GPA	None	7	3.18	.49	9	2.55	.86
	US school	6	3.12	.40	36	2.59	.78
	Canad. sch.	14	3.11	.44	3	3.14	.29
	TOEFL	5	3.05	.43	31	2.92	.52
	Other	--	--	--	2	3.51	.01
	Total	32	3.12	.45	81	2.76	.71
Predicted 1st-year UW cum GPA	None	7	2.64	.46	9	2.63	.28
	US school	6	2.85	.53	38	2.82	.46
	Canad. sch.	14	2.81	.28	3	2.98	.21
	TOEFL	6	2.87	.31	31	2.80	.50
	Other	--	--	--	2	2.86	.01
	Total	33	2.79	.39	83	2.80	.45
UW GPA Difference = Actual - Predicted	None	7	.54	.24	9	-.08	.67
	US school	6	.27	.23	36	-.21	.92
	Canad. sch.	14	.30	.38	3	.16	.50
	TOEFL	5	.30	.42	31	.12	.60
	Other	--	--	--	2	.65	.00
	Total	32	.35	.35	81	-.03	.78

[a]See corresponding footnote in Table 15 regarding limitations in interpreting these data.

while those who attended a US school prior to enrolling at the UW earned a mean first-year GPA which was .21 lower than predicted (2.59 actual and 2.82 predicted).

Discussion

Beyond merely profiling the descriptive data contained in the current report, a more informative summary would be to highlight groups which "stood out", either due to comparatively "low" performance or to relatively "superior" performance. Therefore, with each of the following six variables attention will be drawn to actual mean first-year UW GPA and, in addition, to differences between actual and predicted means which were "reasonably" large (i.e., have an absolute value of at least .20).

(1) Prior achievement in English. Keeping in mind that not all foreign students studied had pre-college test scores available, Tables 12 and 13 revealed that regardless of language group higher WPC Verbal Composite categories were associated with higher first-year UW GPA aggregates. And Tables 15-19 lent support to this association where, in general, subgroups with rather low means on the WPC Verbal Composite had low mean first-year UW GPAs. For ex., consider Table 15 which reported that those classified by residency as nonimmigrants who had other than an F-1 visa (all of whom were in the non-English-speaking group) earned the lowest mean first-year GPA (2.24), the lowest mean WPC Verbal Composite (nearly 36), and achieved a mean first-year UW GPA which was .29 lower than predicted. Another supporting illustration of this point can be found by turning to Table 19, which employed type of pre-college admissions test as the breakout variable. In Table 19 the English-speaking subgroup having American College Test scores earned a WPC Verbal Composite mean which was one standard deviation below the corresponding mean for the total group (ACT group $\underline{M}$ = 39.2 versus total group $\underline{M}$ = 51.9) and had a first-year cumulative UW GPA, while slightly higher than predicted, which was again one standard deviation below the mean cumulative GPA for the total English-speaking language group (means of 2.48 and 2.90, respectively). The one glaring discrepancy was found in Table 19 where non-English speakers with ACT results, while having a low WPC Verbal Composite mean, achieved the highest first-year UW cumulative mean GPA (3.27) in their language group. However, since all of these subgroups had small

samples (N's of 7 or less) more supporting evidence from larger data-based samples is required.

(2) Residence category. Coupling residence with language group, two "high" performing subgroups appeared. First, in the English-speaking language group nonimmigrants with F-1 visas achieved the highest mean first-year cumulative GPA (3.12), a mean which was .35 greater than predicted. Since this finding was based on a relatively large sample (N = 32) one would anticipate that "superior" performance would be replicated among future samples of F-1 visa students from English-speaking countries. Second, for immigrants the actual mean GPAs for either in-state or out-of-state residents did not differ across the language groups (means of approximately 2.75 and 3.01, respectively). However, Table 15 indicated that out-of-state immigrants from non-English-speaking countries achieved a mean first-year UW GPA which was .22 higher than predicted. Of course, as noted in the above paragraph, nonimmigrants with other than an F-1 visa had a substandard performance on all variables.

(3) Sending source. One group was distinguishable but was a borderline case, however. It appears that 2-year transfers from English-speaking countries not only achieved a higher mean first-year GPA than their counterparts from non-English-speaking countries (3.04 versus 2.75, respectively), but as a group they had a mean GPA which was higher than predicted by .17.

(4) Country of last school attended. While we once again experience cell frequencies which are small, Table 17 suggested one of the more interesting findings of the current study. That is, University entrants who enroll directly from a school outside of the United States earned mean first-year GPAs which were substantially higher than predicted and achieved first-year mean GPAs which were high (at least a 3.00). This was true for both language groups.

(5) Country of citizenship. Here one "high" performing group and one "low" were found. In the Americas classification, while those from non-English-speaking countries achieved a lower mean first-year GPA than those from English-speaking countries (2.73 versus 2.92, respectively), they were the one group of students who earned a mean first-year GPA which was comparatively higher than predicted (.22 larger). On the other hand, African citizens (all of whom were in the non-English-language group) did

not do as well as predicted, earning a mean first-year GPA of 2.55 in contrast to a predicted mean of 2.72.

(6) Pre-college admissions test. Across both language groups, those with Scholastic Aptitude Test results achieved a mean GPA which was higher than the corresponding means for their specific language groups (for the English-speaking language group these means were 3.06 and 2.90; for the non-English-speaking language group they were 2.92 and 2.75, respectively) and achieved a mean GPA which was higher than predicted by about .25. Since these data were based on a rather large sample (total N = 68), it is highly probable that such a "superior" performance would be repeated among future foreign applicants with SAT data. Repeating an earlier summarization, the non-English subgroup with ACT scores, while only comprised of 5 students, achieved a mean which was much higher than predicted (3.51 actual versus 2.76 predicted).

In closing, a word or two to advisors and counselors on the University of Washington campus on employing results from the current study. While the comparatively small frequencies in certain cells did not allow for a more refined partitioning of this cohort, a potential "problem" might be indicated if an incoming student had two or more characteristics associated with low first-year UW performance in the current study (e.g., a nonimmigrant student with other than a F-1 visa who had a comparatively low WPC Verbal Composite score). High performers could be similarly pinpointed (ex., those entering the UW directly from a school outside the US regardless of language group would more than likely do quite well during their first year at the University). However, there exists a rather large "grey area" where the data are too sparse to allow for a firm consensus. It is strongly recommended that this study be replicated with a subsequent cohort of foreign undergraduates, therefore, in order to gain a more solid, data-based foundation.

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Appendix A:

Countries of Citizenship in Each World Region

AFRICA: Somali, Nigeria, Ethiopia, Algeria

NEAR EAST: Iran, Lebanon, Saudi Arabia, Israel

AMERICAS: Canada, Mexico, Costa Rica, Chile, Brazil, Peru, Ecuador, Argentina

ASIA: Japan, Korea, Philippines, India, China (both Republic of China and Taiwan, Vietnam, Cambodia, Hong Kong, Singapore, Thailand, New Zealand, Pakistan, Laos, Malasia, Australia, Indonesia, Burma, stateless Asians

EUROPE: United Kingdom, France, Germany, Portugal, Poland, Russia, Iceland, Austria, Turkey, Norway, Netherlands, Yugoslavia, Switzerland, Denmark, Greece

Appendix B

University of Washington Departments Within Each Major Group

Humanities:

Asian American Studies
African Studies
Arabic
Art
Art History
Biomedical History
Black Studies
Chinese
Chicano Studies
Cinema
Classics
Comparative Literature
Communications
Dance
Drama
East Asian Studies
English
French
General & Interdisciplinary Studies
General Studies
Germanics
Health Education
Hebrew
History, General
History of the Americas
History--Ancient and Medieval
History of Asia
History, Modern European
Italian
Humanistic-Social Studies
Japanese
Korean
Latin
Linguistics
Music
Music, Applied
Near Eastern Languages & Literature
Norwegian
Physical Education
Philosophy
Persian
Religious Studies-Comparative Religions
Russia & East European Studies
Russian
Scandinavian Languages and Literature
Spanish
Speech
Speech and Hearing Sciences
Tagalog
Tibetan
Textile Science & Costume Studies
Women Studies

Appendix B con'd

Natural Science (includes all Forestry, Fisheries, Dentistry, Medicine, Nursing, and Pharmacy departments in addition to all natural science fields in the College of Arts and Sciences. One exception was that "Biomedical History" was considered to be in the Humanities area):

Astronomy
Atmospheric Sciences
Biological Structures
Biology
Biochemistry
Botany
Chemistry
Clinical Dietetics
Community Dentistry
Conjoint
Dental Hygiene
Dentistry
Environmental Studies
Fisheries
Forestry, Biological Sciences Division
Forestry, Physical Sciences Division
Genetics
Geological Sciences
Mathematics
Microbiology
Nutritional Science & Foods
Oceanography
Oral Biology
Oral Diagnosis and Treatment Planning
Physiology & Biophysics
Pediatrics
Periodontics
Pharmaceutical Sciences
Pharmacology
Pharmacy
Physics
Pre-major in Fisheries
Pre-major in Nursing
Quantitative Science
Rehabilitation Medicine
Restorative Dentistry
Zoology

Appendix B cont'd

Social Science:

- Anthropology
- Archaeology
- Economics
- Geography
- Physical Anthropology
- Political Science
- Psychology
- Society and Justice
- Sociology
- Social Work

Engineering (All engineering departments except "Humanistic-Social Studies" which was considered as a Humanities area):

- Aeronautics & Astronautics
- Bioengineering
- Chemical Engineering
- Civil Engineering
- Civil Engineering, Water & Air Resources
- Computer Science
- Electrical Engineering
- Engineering
- Mechanical Engineering
- Mechanical/Industrial Engineering

Other:

- All Architecture department (i.e., Architecture, Building Construction, Landscape Architecture, Urban Planning)
- All Business departments (Administrative Theory & Organizational Planning; Accounting; Business Economics; Business, Government and Society; Finance; International Business; Human Resources Systems; Marketing; Operations & Systems Analysis; Quantitative Methods; Transportation)
- All Education departments (Education, Educational Curriculum and Instruction, Educational Psychology)

Pre-Business Administration (College of Arts and Science pre-major code of 245)

Pre-Major in College of Arts and Science (College of Arts and Sciences major code of 256)